IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

IN RE: REMBRANDT TECHNOLOGIES, LP PATENT LITIGATION	MDL Docket No. 07-md-1848 (GMS) (All Cases)
MOTOROLA, INC., et al., Plaintiffs, v. REMBRANDT TECHNOLOGIES, LP, Defendant.	C.A. No. 07-752 (GMS)
REMBRANDT TECHNOLOGIES, LP, et al., Counter-Plaintiffs, v. MOTOROLA, INC., et al., Counter-Defendants.	
REMBRANDT TECHNOLOGIES, LP, et al., Counter Counterclaim-Plaintiffs, v. TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP, et al., Counter Counterclaim-Defendants.	

THE CABLE PARTIES' ANSWERING BRIEF CONCERNING U.S. PATENT NOS. 5,852,631; 5,710,761; 4,937,819; 5,719,858; 6,950,444; 5,008,903; 6,131,159; AND 5,778,234

Jack B. Blumenfeld (#1014)
Morris, Nichols, Arsht & Tunnell LLP
1201 N. Market Street
Wilmington, DE 19899
(302) 658-9200
jblumenfeld@mnat.com

John W. Shaw (No. 3362)
Young Conaway Stargatt & Taylor, LLP
1000 West Street
Wilmington, DE 19801
(302) 571-6600
jshaw@ycst.com

Co-Liaison Counsel for All Parties Other Than Rembrandt

John M. Desmarais, P.C.
KIRKLAND & ELLIS LLP
Citigroup Center
153 East 53rd Street
New York, New York 10022-4611

David S. Benyacar
Kaye Scholer LLP
425 Park Avenue
New York, NY 10022

Co-Lead Counsel for All Parties Other Than Rembrandt

Eric R. Lamison
Benjamin Ostapuk
KIRKLAND & ELLIS LLP
555 California Street
San Francisco, CA 94104

Dated: July 2, 2008

TABLE OF CONTENTS

TABLE OF CONTENTS (CONT'D)

TABLE OF AUTHORITIES

Page(s)

Cases

TABLE OF ABBREVIATIONS AND CITATION FORMATS

Cable Parties	Equipment Vendor Plaintiffs/Counter-Claimants & Cable Sytems Operators Defendants/Counter-Claimants adverse to Rembrandt/Remstream in pleadings on the Eight Patents (individual Cable Parties join only the 8 patent subset asserted against them)
'631	U.S. Patent No. 5,852,631
'761	U.S. Patent No. 5,710,761
'819	U.S. Patent No. 4,937,819
'858	U.S. Patent No. 5,719,858
'444	U.S. Patent No. 6,950,444
'903	U.S. Patent No. 5,008,903
'159	U.S. Patent No. 6,131,159
'234	U.S. Patent No. 5,778,234
CLCI	Communication Link Control Information
CPM	Central Packet Manager
DPM	Distributed Packet Manager
DOCSIS	Data Over Cable Service Interface Specification
ECNS	Error Control Negotiation Sequence
EP Set	Essential Programs Set
ITU	International Telecommunications Union
MAPC	Multiple Access Packet Channel
NAU	Network Access Unit
NAM	Network Access Module/Manager
PSTN	Public Switched Telephone Network

CITATION FORMATS

All emphasis in the Brief is added unless otherwise noted.

(#___)	Number for the Row in which a term to be construed appears for a given patent in the Parties' Joint Claim Construction Chart
(column numbers : line numbers.)	Patent specification column and line reference
(A__)	Citations to a case in the numbered listed in the Table of Authorities in the Opening Brief
(AL __)	Paragraph in Almeroth's Declaration found in the Joint Appendix (R135)
(C__)	Citations to the Cable Parties' exhibits in the Joint Appendix (consecutively paginated)
(CP, p. __)	Cable Parties June 4 Opening Brief
(F__)	Citations to the File History in the Joint Appendix (consecutively paginated)
(RB, p. __)	Rembrandt's June 4 Opening Brief
(V__)	Citations to the V. Protocols in the Joint Appendix (consecutively paginated)

INTRODUCTION

The Cable Parties carefully support each proposed claim construction with unambiguous intrinsic evidence. In contrast, Rembrandt proposes constructions with no intrinsic support, contrary to the Federal Circuit's mandate in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005). Rembrandt monotonously repeats that the Cable Parties seek to "import" limitations, yet ignores the intrinsic records upon which the Cable Parties have carefully based their constructions. Despite this unambiguous intrinsic evidence, Rembrandt relies on a conclusory extrinsic expert declaration which lacks *any* supporting documentation and, for many reasons, should be rejected under settled law.[1] Rembrandt extracts individual words, divorced from their claim language, and produces constructions in conflict with the patents' specifications and histories. In the end, Rembrandt's distorted, extrinsic approach creates constructions bearing no resemblance to Paradyne's patents or the inventions they disclose and claim.[2] This Court should not accept Rembrandt's invitation to depart from the intrinsic records and should instead adopt the intrinsic record constructions advanced and supported by the Cable Parties.

---

1 *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005) (***rejecting*** expert declaration not supported with industry publications or similar sources); *Sextant Avionique, S.A. v. Analog Devices, Inc.*, 172 F.3d 817, 825 (Fed. Cir. 1999) ("Sextant's claim construction arguments hinge on an ironic contention: that the evidence intrinsic to its own patent is ambiguous and insufficient to construe the claims, thus requiring resort to extrinsic evidence such as expert testimony. We ***disagree*** . . . ."). Moreover, Rembrandt's "expert" used a flawed, baseless skill in the art "prism" for his whole opinion. *Compare Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 449-50 (Fed. Cir. 1986) (identifying factors relevant to level of skill: "educational level of the inventor, type of problems encountered in the art, prior art solutions, rapidity of innovation, sophistication of technology, and educational level of active workers in the field") *with* (C122, Almeroth Tr., 10:12-11:20, admitting he has ***no*** knowledge of the patentee, inventors or their field.)

2 Rembrandt's proclaims, without citation, that "the eight Rembrandt patents-in-suit relate to cable modems and systems." This is fiction. Rembrandt admits that Paradyne never sold a cable modem. (D.I.# 47, ¶ 21.) A "***cable*** modem" is never mentioned in these patents.

I. '631 PATENT[3]

1. Rembrandt Ignores The "Calling," "Answering" and "Modem" Limitations (#1, 2)

The purported invention of the '631 is reducing the time to establish physical and link layer connections between two modems by determining if certain parameters of telephone network (*i.e.* cellular or PSTN) physical layer standards (*e.g.* V.32, V.34) and link layer standards (*e.g.* V.42, V.42bis) can be set to default values to eliminate the need to communicate set those values. Therefore, the specification only discloses modems that place (and answer) telephone calls over telephone networks, and the claims are limited to "calling modems" and "answering modems." (#1, 2). (Hereafter "#" refers to the row number in the Parties' Joint Claim Chart for a given patent, D.I. #237.)

Rembrandt's construction that a "calling modem" is "a communication device that begins the process of establishing or attempting to establish a connection with another communication device" ignores both the "calling" and "modem" claim limitations. Rembrandt's "answering modem" construction, which relies on its erroneous "calling modem," is similarly flawed. "Calling" is not synonymous with "beginning," either in plain English or any technical discipline, and Rembrandt offers no evidence to support its attempt to rewrite the claims. Rembrandt does not, and cannot, dispute that every disclosed embodiment includes a modem placing a telephone call over either the PSTN or a cellular network to another modem, or that the

---

[3] The number of disputed claim terms in the 8 patents comes from Rembrandt's assertion of ***80*** claims. When the Court allowed Rembrandt leeway for the infringement contentions, this was premised on Rembrandt's commitment to assert only those claims likely to be tried. (D.I. #122, 2/26/08 Tr., 21:6-10; 26:9-16.) It seems unlikely Rembrandt would try ***80*** claims. Cable Parties also object to Rembrandt's Joint Appendix filing of 65 pages of its Texas' briefs, where the 40 page limits for claim construction here were specifically set.

disclosed protocols used by the modems are telephone network standards.[4] Rembrandt's brief distorts the '631 sentence referring to mediums "including cellular and PSTN," which confirms that each connection includes a PSTN or cellular modem. (4:22-23.)

Trying to avoid these clear disclosures regarding the modems in FIG. 1, Rembrandt relies on a background reference to TCP/IP in the specification, and a cloud representing "IP, ETC." that appears to the far right of FIG. 1. Neither supports Rembrandt's construction. The reference to the TCP/IP "model" appears only in the background section of the specification, and only to explain that protocol stacks, like OSI and TCP/IP, have a "physical layer" and a "data link layer" as their lowest two layers. (1:33-47.) These model stacks do not disclose an actual modulation used in any embodiment of the purported invention. (*Id.*) This background simply explains that the "V." and ETC-QC telephone network standards are limited to "either the physical layer or data link layer" of a protocol stack such as the OSI or TCP/IP "model." (1:55-2:59.) Layers other than the physical and link layer and uses of the model protocol stacks other than for telephone network communication are irrelevant to the invention and are not discussed.

The "IP, ETC." cloud to the far right of FIG. 1 is another red herring. The specification never discusses the cloud and does not disclose "calling" and "answering" modems as communicating over it. Indeed, no two modems in FIG.1 are capable of communicating over this cloud because only "single-ended modem **28**" is connected to it. The cloud is depicted because it could exist for uses unrelated to the patent, but has absolutely no relevance to the '631

---

[4] These V. standards are for "Data Communication Over The Telephone Network." (V1, 15, 22, 38, 56, 83, 107, 177, 257.) The '631 "calling" and "answering" modems must have "V." operability. If they don't support ETC2-QC, they can't use the invention and must fallback. (F62,"Support of Standard V.34"; F13, "modem reverts to standard V.34"; '631, 13:16-21.)

invention. "Single-ended modem **28**" *answers* a *call* placed to it by a PSTN or cellular *calling* modem of FIG. 1, as Rembrandt admits on page 5 of its Opening Brief, hereafter "RB."

Rembrandt's construction not only ignores the specification; it ignores the entire intrinsic record. The '631 claims priority to two provisional applications, both of which are expressly directed to and only disclose dial-up PSTN or cellular telephone modems. ("System and Method for Fast Start-Up for Dial Modems" (F3); "Cellular Data Protocol For Quick Connection" (F48).) These provisionals confirm that a "calling modem" places a call to an answering modem over the PSTN or cellular telephone network. (F5-7, 12-13, 15, 55-58, 60-61, 84, 102.)

2. "Physical Layer Modulation" Is A Telephone Network Standard Governing Only The Establishment Of A Physical Layer Connection (#7)

Rembrandt never explains the basis for its construction of "physical layer modulation." (#7). It construes "physical layer," which does not appear in the claims as a stand-alone term, according to extrinsic sources as being "concerned with establishing the mechanical, electrical, functional, and procedural connection between two communication devices." (#5). It then construes "physical layer modulation" as any "protocol that is concerned" with such things without regard for the actual meaning of "*modulation*" in the patent or literature. This is not proper claim construction.

The '631 uses the term "physical layer *modulation*" to refer only to telephone network (PSTN or cellular) physical layer standards such as V.32, V.34, *etc.* "[T]he modem of the present invention will preferably include . . . Enhanced Throughput Cellular 1™ (ETC1™), V.34, V.32bis, V.32, and V.22bis ***modulations.***" (6:14-17; *see also* 5:9, 5:25, 6:12-22 and 7:18-20, referring to these as "***modulation protocols"*** or "***modulation standards.***") This is consistent with the plain meaning of "modulation protocol" as a protocol used by modems "over an analog telephone line" according to various "V." standards. (C78.) Likewise, prior art patents refer to

various V. "modulations." (F1631; C58-60, 62-65, 67-69, 72.) Rembrandt's assertion that "modulation" means any kind of protocol, including protocols having nothing to do with telephone network standards, contradicts both the specification and plain meaning.[5]

In addition, these physical layer modulation standards concern only the physical layer connection, and do not concern the link layer connection, which is governed by different standards. A physical layer or link layer standard is "directed to an aspect of *either* the physical *or* data link layer." (1:60-61.) The '631 carefully delineates between physical layer standards (1:62-2:38; 6:14-17; 6:34-36) and link layer standards. (2:39-54; 11:29-33.)

3. Rembrandt's Construction Of "Establishing A Physical/Link Layer Connection" Vitiates Claim Language And Ignores The Specification And Prosecution History (#4, 8)

Contrary to Rembrandt's contentions, the Cable Parties do not "impose temporal or ordering requirements" (RB7) on the claim limitations, but simply adopt the ordering that the '631 patent's claims and disclosure plainly require. (#4, 8.) The '631 instructs that completion of the "training and startup sequence" "signifies the establishment of a physical layer connection between two modems", and explains that "***[a]fter*** the physical layer has been established, the communicating modems ***enter*** the information exchange/sequence, referred to herein as ***error correction negotiation 44***, in order to establish the link layer connection." (6:57-61.) Because "[t]he link layer connection ***follows*** the physical layer ***connection*** and ***uses the physical layer*** in establishing the error-corrected connection," (11:32-35; 11:22-27), the '631 attempts to speed up the connection process by, among other things, having the "link layer connection include[]

---

5 The '631 only relates to modems communicating over telephone networks. The inventor realized if two modems could first determine between themselves whether they are connected through PSTN or only cellular networks, and whether any 2-wire connections are between them, certain default settings could be used for parameters that the telephone network standards would otherwise have to negotiate. (*See, e.g.* 5:64-6:8; 10:65-11:8.)

parameters that are preset to default values based upon the negotiated physical layer connection." (3:10-13.) The claims, as the intrinsic record dictates, stick to this order, first "establishing a physical layer connection . . . based on a negotiated physical layer modulation," then "establishing said link layer connection based upon said negotiated physical layer modulation," plainly using the past tense to reflect completion of the physical layer establishing element. *See E-Pass Techs., Inc. v. 3Com Corp.*, 473 F.3d 1213, 1222 (Fed. Cir. 2007) ("[B]ecause the language of most of the steps of its method claim refer to the completed results of the prior step, E-Pass must show that all of those steps were performed in order."); *Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1321-22 (Fed. Cir. 1999) (holding that claim language and intrinsic records required sequential order of steps); *Oak Tech. Inc. v. ITC,* 248 F.3d 1316, 1328 (Fed. Cir. 2001) (construing apparatus claim to require sequential operation of elements of the claims).

Rembrandt complains that establishing physical/link layer connections should not require defaulting to parameters preset in each modem before the call. However, as explained above and in Cable Parties' Opening Brief (Hereafter "CP", 5-6), defaulting to preset parameters rather than using telephone network standards to negotiate them ***is*** the invention as shown in the Abstract, the Field of the Invention and many other places. (Abstract, 1:17-20.) When establishing the invention's physical layer, "the modems can default to preset values . . . during the training and start-up sequence **42**" (11:2-10), while "[a]nother step includes establishing a link layer connection based upon the negotiated physical layer modulation. This link layer connection includes parameters that are preset to default values based upon the negotiated physical layer connection." (3:9-15.) File history confirms this too, with Paradyne referring to its application as "***Presetting*** Link Layer Parameters Per Physical Layer Startup." (F196.) Rembrandt's attempt to invoke claim differentiation cannot overcome the intrinsic evidence. *See Multiform Dessicants Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1480 (Fed. Cir. 1998) ("[T]he doctrine of claim

differentiation can not broaden claims beyond their correct scope . . . . [C]laims that are written in different words may ultimately cover substantially the same subject matter.").

Lastly, and again contrary to Rembrandt's contention, the Cable Parties' construction that physical and link layer connections are established without exchanging data bytes is grounded in the intrinsic evidence, here the inventor's unmistakable surrender of subject matter. (CP5.)

4. Rembrandt's Construction of §112 ¶ 6 Limitations Is Contrary to Law (#10, 11)

The parties agree that "means for establishing a physical layer..." should be construed pursuant to §112, ¶ 6 and agree that corresponding structure includes the control processor of the modems and software programming. (#10.) Rembrandt, however, fails to include the requisite corresponding algorithms for the claims' programming. When corresponding structure includes a processor executing software, the structure is limited to a processor programmed with the disclosed algorithms. *WMS Gaming, Inc. v. Intl. Game Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999) ("[T]he court erred by failing to limit the claim to the algorithm disclosed in the specification. The structure of a microprocessor programmed to carry out an algorithm is limited by the disclosed algorithm.") Figures 4 through 7 depict "software flowchart[s]" of the tones exchanged between calling and answering modems in order to establish the physical layer in accordance with the invention. (3:40-52; FIGS. 4-7) Claim 6's "means for establishing a physical layer" must include its disclosed algorithms (3:40-52; 7:43-11:28, FIGS. 4-7.)[6]

Claim 10's "logic for . . ." limitation should be construed under §112, ¶ 6 (#11.) *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1214 (Fed. Cir. 1998) ("[L]ack of [means]

---

[6] Rembrandt's effort to use FIG. 9 to avoid the algorithms is also wrong because the patent's discussion of FIG. 9 says that "operating code" "controls . . . the type of modulation and error correction techniques utilized which is ***dependent upon*** whether the modem is used for cellular or land-line connections," and this is determined in FIGS. 4-7 (14:1-5.)

language does not *prevent* a limitation from being construed as a means-plus-function limitation."); *ABB Automation Inc. v. Schlumberger Res. Mgmt. Servs., Inc.*, 2003 WL 1700013 (D. Del. Mar. 27, 2003) (holding that "'logic' does not recite sufficient structure to avoid means-plus-function analysis"). The *3Com* case cited by Rembrandt is inapposite, because the claims, which arose in a patent that disclosed "dedicated hardware logic," recited "sufficiently detailed" language "to suggest structure" akin to a "circuit," which the Federal Circuit has held to be sufficient structure, *3Com Corp. v. D-Link Systems, Inc.*, 473 F.Supp.2d 1001, 1016-17 (N.D. Cal. 2007). '631 claim 10 does not recite such "sufficiently detailed" language and Federal Circuit law regarding a "circuit" is irrelevant. Indeed, Rembrandt agrees that claim 10's "logic" limitation refers to "programming." Claim 10's limitations are akin to limitations in *ABB Automation*, where claims were to "logic for periodically performing" and "logic for designating" and construed under §112 ¶6. *ABB Automation*, 2003 WL 1700013 at *1-2. Claim 10's corresponding structure is the same as claim 6's "means for establishing a physical layer," but without answer modem algorithms because Claim 10's logic is "for use in a calling modem."

II. '761 PATENT

The '761 is based entirely on one observation: telephone modems that support "V." telephone network physical layer standards having numbers above V.22 (V.34, V.32, V.32*bis*) will support the LAPM telephone network link layer standard, while modems that support only V.22 or lower-numbered "V." standards will not. (2:13-20.) Based on this observation, the inventor realized a modem could automatically select which stored error control negotiation sequence (ECNS) to use based on which physical layer "V." standard was used for the physical layer connection. (CP6-8.) That is the totality of the invention and sole context in which it is described. The claims must be construed within that context. *On Demand Mach. Corp. v. Ingram Indus.,*

Inc., 442 F.3d 1331, 1340 (Fed. Cir. 2006) (construing "customer" in context of written description).

1. "Negotiating A Physical Layer Of A Data Connection. . . To Determine A Set Of Parameters For The Physical Layer " & "Error Control Negotiation Sequences" Refer To May 31, 1995 Telephone Standards (#1, 4)

The Cable Parties construe the physical layer claim element in the only way supported by the specification and in the only way supported by the specification's description of the invention: a "V." telephone network physical layer standard is negotiated by the communications equipment and used to establish a physical layer connection. (#1.) An ITU link layer error control protocol is then selected as a function of a determined physical layer parameter for the negotiated V. standard. (#4.) The '761 expressly taught that "Modems that do not support LAPM" had to be "i.e., MNP-only or non-error control modems." (1:66-2:1.) The '761 relies on this set of link layer protocol choices, and observations relating to it, for the invention. (*Id.*; 2:11-24.) Because the invention is based on the inventor's observation of then-existing standards, the PTO required that he limit the scope of the claims to standards in existence as of the filing date. (CP10.) The patent boilerplate on which Rembrandt relies -- that "[t]he present invention relates to data communications equipment, e.g. modems" (1:5-6), is not a basis for expanding the scope of the claims beyond anything invented or described.

2. An ECNS Is A Stored Sequence Of Link Layer Protocol Standards (As Of May 31, 1995) That Modems Will Attempt To Use In Turn (#3)

The Cable Parties' construction of ECNS comes from the specification and, like our construction of "negotiating a physical layer . . .," is the only construction that makes sense in view of the invention and its disclosure. (CP8.) Rembrandt says (RB10) that the **error control** limitation must mean "a variety of approaches . . ." (#4) simply because it says that one "approach to error control may be to do nothing," citing 4:12, which refers to "Buffer." (RB10.)

But, the '761 never refers to "approaches" in connection with an ECNS. Instead, it consistently defines an ECNS as a sequence of "types of error control protocols." (1:13-15; 17-33.) Rembrandt also ignores that the '761 expressly defines "Buffer" as one of the three existing "types of error control protocols." (1:17-21.) Rembrandt's ambiguous "approaches" construction also ignores completely that the '761 expressly defines "error control" in an ECNS as a protocol that governs the link layer, explaining how the "type of **error control** protocol is representative of the 'link' layer" of the connection" (1:15-16; 2:19-20.)

Accordingly, Rembrandt's proposed construction of ECNS as "a sequence of approaches that a communication device may employ . . ." (#3) yet again reflects its general efforts to convince the Court to construe the claims in manner that bears no relationship to what was invented and described. Rembrandt's ambiguous "approach" concept is nowhere described in the '761, and Rembrandt's construction simply fails to give any meaning to "sequence."[7]

3. Rembrandt Ignores Unambiguous Evidence That The Physical Layer Connection Is Negotiated Before Selecting A Link Layer Error Control Negotiation Sequence (#5)

Rembrandt's rejection of the "temporal limitation" whereby the physical layer connection is established *before* negotiating error control is entirely implausible. (#5.) The '761 says that "the modulation (physical layer) is ***always*** negotiated before the error control protocol (link layer). Therefore, and in accordance with the invention, a modem dynamically selects the type of link layer negotiation sequence as a function of a negotiated parameter of the physical layer." (2:19-24.) Accordingly, "CPU **110** first negotiates . . . the physical layer of the data connection" and "[a]fter" that step selects an ECNS using the value of a determined physical layer parameter.

---

7 Rembrandt's argument (RB13, n.8) that our construction of error control (#4) does not fit into our construction of "to determine . . ." (#2) places form over substance. Construction (#2) should read as "before negotiating an error control, the negotiated . . ."

(3:43-45; 3:51-4:1; Fig. 2's first step, **305**; 1:15-16.) This is not only fundamental to the invention, it is required by the claims which specify selecting an ECNS "as a function" of a value determined in the prior negotiating step or an apparatus that negotiates and "then selects" the ECNS in a similar fashion. (CP9.) *See E-Pass Techs., Inc.*, 473 F.3d at 1222; *Loral Fairchild*, 181 F.3d at 1321-22; *Oak Tech,* 248 F.3d at 1328.

III. '819 PATENT

1. Only Cable Parties' Construction of "Application Program" Is Plain Meaning (#4)

Rembrandt agrees that "application program," which does not appear in the specification, should be construed "as understood by a person of ordinary skill." However, Rembrandt provides no credible evidence to demonstrate that its construction is the plain meaning. Without support, Rembrandt's expert states that he reads "application programs" to mean "simply programs," thereby vitiating the "application" requirement. (AL ¶58.) Our construction of "application program" (#4) is consonant with the plain meaning, supported by prior art cited by the applicant, dictionaries, and the inventor's testimony. (F1604) (C11,15) (C130, King Tr., 46.)

2. "Time Slot," "Subframe" and "Frame" Should be Construed Based on the Claim Language and the Specification (#5, 7, 10, 12)

Rembrandt's constructions ignore express claim limitations and the meaning the specification assigns to its coined term "subframe." (#12.) In arguing that **subframe** only "represents a portion of a time period" (RB28), Rembrandt attempts to read **subframe** out of the claims. Every claimed time "period" (a "frame", 4:54-55) necessarily is, and has, a portion of time. The claims require more by requiring every frame to be "divided" into "subframes," which are further limitations that must be given meaning. (#10.) A "frame" "divided into subframes" plainly entails subframes that begin and end within the frame of which they are divisions (CP14), consistent with the plain meaning of "divide" (when one divides a cake into slices, every slice comes from the same cake.) Further, the specification requires that each subframe is assigned to

a single remote unit, because there is nothing else to which the subframe could be assigned. The user makes the "subframe assignments" (3:1-3), which must refer to assigning them to remote units because host applications are assigned to slots (4:56-60.) This construction is confirmed by originally filed claim 13, which says that each subframe "correspond[s] to transmission time for one of said remote units." (F1406.) Issued claim 14 contains similar language. (CP14.) The coined term "subframe" thus refers to a portion of a frame assigned to one remote unit for transmission, whereby every subframe begins and ends within one frame.

The claims further require that each subframe be divided into time slots whereby "each of said time slots is used as an interval in which one of said application programs . . . is assigned to transmit." (Claim 1; *see also* claim 14) (#5.) The specification, in view of which this limitation must be construed, says repeatedly that a "subframe is further subdivided into slots, *one for each application*." (4:56-57; 2:5-10; 6:49-51; *see also* FIG. 5, where each application is assigned to only one time slot.) The intrinsic evidence thus unambiguously supports our construction that **in a time slot assigned to each of said application programs** means "each application program is assigned to a single slot per subframe."

Under the proper construction of "slot" and "subframe," then, every frame is divided into subframes, one assigned to each remote, and every subframe is divided into slots, one assigned to each application of the remote. In an attempt to change the '819 patent to try to cover different remotes and applications contending for use of the same time slot, Rembrandt vitiates the "assignment" limitation, proposing to construe assigning a time slot to each application program to mean "[a]n interval of time during which data from an application program may be transmitted." (#7.) In fact, the patent's "assignment" method was designed to avoid such contention for the same slot: "[C]ontention between applications is thereby avoided due to the fact that each application is assigned such a unique time period." (2:8-10) (C131-32, King Tr. 52:16-21; 59:9-18.)

Rembrandt further argues that subframes and time slots need not be assigned by a user at initialization because this is only "an example." In fact, however, the '819 patent allows slot and subframe assignments *only* by user input at initialization. (3:1-3; 5:46-56.) The FIG. 8 disclosure, in contrast with FIGS. 6 and 7, does not permit assigning them in "normal operation" (2:49-50) after initialization. User initialization is not optional: "As part of the installation of this device, both the master and remote units must be initialized." (5:8-9)

Rembrandt also argues that "subframes and time slot assignments" do not "repeat from frame to frame" (RB28), but admits that time division multiple access frames repeat ('858, #3.) If frames repeat, so must the subframes into which frames are divided. Rembrandt's position also contradicts the '819 itself, which says that "[t]he time division multiple access ***sequence***," including the slot and subframe assignments, "is established by the user" at initialization and then used during "normal operation" for transmissions. (4:53-61; 3:1-3; 5:57-68.) "This process" of transmission during normal operation "is continually repeated for each application in each remote." (5:67-68.) Indeed, because assignments of slots and subframes occurs only at initialization, they must be "continually repeated," as there is no way to re-assign them in "normal operation." Accordingly, **a period which is divided . . .** can only mean "during initialization, a fixed, repeating length of time called a frame is divided by a user . . . whereby the subframes and time slot assignments repeat from frame to frame."

3. "Reservation Request" Generator / Processor (#15-19)

The inventor gave the coined term **reservation request generator** a specific meaning in the specification which Rembrandt characterizes as "needlessly complex." (RB28) (#17.) Complexity is not a reason to ignore the specification's definition of a term. The specification says that **reservation request generator** "monitors" a compression buffer in the remote that

holds data to be transmitted, and if the buffer "exceed[s] a preset parameter limit" it "sets the reservation bits." (4:8-14.) That is the way the term must be construed.

Rembrandt argues that "[a] 'reservation request,' is a request to obtain additional time slots" (RB28), failing to acknowledge that the remote cannot take over another remote's time slots, but only borrows time slots that were assigned to other remote units at initialization. If a reservation request is granted, the master authorizes the requesting remote to use slots belonging to "subsequent units" "until the message transmission has been completed." (2:26; 7:7-14.) This aspect of the Cable Parties construction comes straight from the specification. (#15-19.)

Rembrandt's **reservation request bit** construction ignores the claim language, which requires a dedicated bit that the remote "*activates*" if needed, and specification which discloses activating an existing bit that "[e]ach" time slot "contains" for reservation requests. (4:64-65.)[8]

4. "Priority Bit" (#20)

Rembrandt disputes our construction, but cannot cite anything in the specification to support its construction. (RB29.) The patent only supports construing priority bit as "defin[ing] the remote's relative importance . . . ." (7:2-3; 2:22-26) as assigned at initialization (3:1-6.) Nothing in the '819 patent supports the priority of the "message" meaning urged by Rembrandt.

5. The Applicant Expressly Confirmed Claim Scope for "Master Unit"/"Remote Unit" (#1, 2)

Rembrandt's constructions again ignore the intrinsic evidence. To overcome a rejection, the applicant argued that the prior art "is quite different from the invention of the presently

---

[8] Rembrandt argues that our construction of **"reservation request processor . . ."** is defective because it will "allow a remote to request . . ." instead of merely process "requests once they have been made." (RB29.) This is caviling. The **reservation request processor** allows the reservation request generator to request to borrow slots in the same sense that a restaurant manager answering a phone allows a customer to reserve a table.

pending claims" because "the outbound messages" from the prior art's "master unit are 'packetized' whereas the instant claimed invention is time division multiplexed without packet headers and delimiters." (F1461.) The '819 patent thus shows TDM multiplexed outbound messages, not packetized messages (1:63), and "master unit" must be construed as a "device installed in a network that sends messages to its remote units using time division multiplexing without packet headers or delimiters." (#1.) *Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 1997) ("[B]y distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover, he is by implication surrendering such protection.") "Remote unit" should be similarly construed. (#2.)

6. "Multidrop" Should Be Construed In View Of Intrinsic Evidence & Plain Meaning (#2, 3)

Rembrandt's opening brief ignores the "multidrop configuration" limitation completely. "Multidrop" in the '819 refers to a sequential polling system in which "[a]ll inbound transmissions contain . . . poll response data." (CP12-13) (6:57-60; 1:7-12; 2:26-28.) This matches the term's plain meaning: "Multidrop Line: A communications channel that services many data terminals at different geographical locations and in which a computer (node) controls utilization of the channel by polling one distant terminal after another and asking it, in effect, 'Do you have anything for me?'" (C19; *see also* C23.) Prior art Paradyne cited in its file history (intrinsic evidence) entitled "Multidrop Data Concentrator Communication Network" likewise describes communication between the "central office" where the drops only communicate by responding to "polling [of] the individual drops from the master or central site." (F1604 at 2:4-8); *see V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005) (holding that cited prior art is intrinsic evidence). Intrinsic evidence and plain meaning both provide that

a "multidrop configuration" is a "configuration where all inbound transmissions to the master unit contain responses to outbound polls . . ." (#2, 3.)

7. "Master Network Timing Means" Is The "Network Timing And Control Processor" Initialized By The User (#9)

"Master network timing means" lacks plain meaning, so it must be construed from its disclosure. *See Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) ("[A]bsent such an accepted meaning [in the art], we construe a claim term only as broadly as provided for by the patent itself.") Rembrandt implausibly argues that storing user-input initialization parameters "is not mandated by the intrinsic evidence" (RB30), even though such user-input parameters are a key feature of a "network timing and control processor." The specification says the system "must be initialized" (5:8-9), and the only way to initialize it is by a user like a "network administrator," inputting initialization parameters into the master's "network timing and control processor" (2:68-3:3; 5:46-56) (C133, King Tr. 126), which Rembrandt agrees is the "master network timing means." (RB29.)

8. "Ranging Means" Is Governed By 35 U.S.C. §112, ¶6 (#14)

Rembrandt argues that "ranging means" is not governed by §112, ¶ 6 because claim 1 supposedly does not recite a function performed by its means. This is wrong. The function is "communicating with said master network timing means wherein . . . ." Rembrandt offers nothing else to overcome the presumption that §112, ¶ 6 applies, and agrees with our corresponding structure. (#14) (RB30, n.13.) For reasons described in our opening brief (CP15), and further supported by specification excerpts relied on by Rembrandt (RB30, n.13), this "means-plus-function" limitation should be construed as components **12**, **20** and **32** "executing

an algorithm to perform, during initialization of the master unit before the remote units transmit data, a ranging calculation for each combination of remote unit and application."[9]

9. "Transmitting . . . the transmission time" must occur before "transmitting data" (#22)

Rembrandt argues that transmitting . . . the transmission time . . . in claim 14 (part of ranging) need not be performed during initialization, before remotes begin transmitting data. (RB30-31.) Claim 14 and the specification require otherwise. In claim 14, **transmitting . . . the transmission time** causes "adjust[ing] initiation of said slots," the "said slots" referring to the slots which "correspond[] to transmission times for . . . remote units." The step following the **transmitting . . . the transmission time** step calls for "transmitting data from each of said remote units," which must use the adjusted slots. Therefore, the claim requires that the **transmitting . . . the transmission time** step occur before remotes begin transmitting data. This is confirmed by the specification, which says ranging is performed during an "initialization phase" before "normal operation." (5:24-33, 57-58.) Accordingly, at least the last two steps of claim 14 must be performed in order. *E-Pass Tech., Inc.*, 473 F.3d at 1222 (holding that claim steps must be performed in order where completion of one step is predicate for the next step).

IV. '858 PATENT

1. Rembrandt's Only Dispute With The Cable Parties' Construction Of "Time Division Multiplexed Bus" Comes From Rembrandt's Misreading Of the Patent (#3)

Rembrandt agrees that a **time-division multiplexed bus** is "partitioned into a . . . sequence of time slots . . ." and does not dispute that this repeating sequence is "defined to be used in the same way during each repetition." (#3) (RB18-19.) Rembrandt only takes issue with the construction that "only one device can successfully transmit over the [time-division

[9] Even if §112, ¶6 did not apply, **ranging means** is construed the same way as a coined term.

multiplexed] bus at any one time" - based on its erroneous contention that the'858 "expressly describes a bus which can support simultaneous transmission of packet data and synchronous data." (RB18.) Nowhere does the '858 say this. In the '858, the "*time* division multiplexed bus" has its entire bandwidth multiplexed by *time*.[10] (2:57-81; 5:21-30; FIG. 5.) If two devices attempt to simultaneously transmit over this physical bus, the transmissions will collide and neither transmission succeed. An "access method" is required (6:53-64) to avoid this problem by permitting only one device to attempt to transmit at a time.[11]

Rembrandt's contention that the disclosure of a bandwidth having "multiple logical channels" means that "two or more devices" can transmit "at the same time" also misreads the patent. (RB18-19.) A logical channel simply represents an allocation, at initialization, of time slots on the bus for the same purpose, which has nothing to do with whether two devices can transmit data onto the bus at the same time. For example, slots 1-6 may be allocated as a MAPC to packet data, and slots 7-N may be allocated to non-packetized data (Fig. 5) or slots "7-12" could be allocated to a MAPC (11:7-12.) In each case, however, only one device transmits in an interval of time on the bus. Indeed, Rembrandt admits that "[t]he bandwidth . . . is partitioned into regular time slots, which help to delineate 'channels' on the bus." (RB18; A¶52.)

Finally, Rembrandt is wrong when it says that our construction makes a limitation of claim 9 redundant. (RB19.) Claim 9 requires "that only one of the plurality of packet data sources accesses the second portion of the predefined bandwidth at a time," meaning there will

---

[10] Rembrandt's construction of a TDM bus as "a bus having a bandwidth " partitioned by time, instead of "a bus having *its* bandwidth" partitioned by time, should therefore be rejected. The specification does not disclose a bus having other bandwidths not multiplexed by time.

[11] In the prior art NAU of FIG. 2, a central packet manager communicated with each packet application module in different time slots assigned to each module. (2:15-23; 4:61-62.) This made sure only one device transmits at a time.

never be collisions. This does not change the fact that if transmissions by two different devices collide (which the patent says its devices are designed to avoid), neither transmission will succeed. Only one device can "successfully" transmit at a time on a TDM bus.

2. The '858 Does Not Define "Packet Data" To Include Non-Packet Data (#4)

Contrary to Rembrandt's contentions, the specification does not redefine "packet." In fact, the specification confirms that "variable bit rate" data is referred to as "packet" data because the invention is only concerned with variable bit rate data in packetized form: supporting packet data "provides the ability to interwork with public network *packet services*." (1:22-24.) If, as Rembrandt argues, packet data need not be packetized, it would not be capable of interworking with public network packet services. The '858 inventor himself confirmed that "packet switching refers to individually routing a packet through a network . . . based upon the packet's characteristics, for example, an address." (C95, Moore Tr., 151:5-152:7.)

3. "Synchronous Data" Means TDM Data That Is Not In Packets (#16)

Rembrandt is correct when it says "[s]ynchronous data are contrasted with packet data in . . . and so should have a distinct meaning." (RB19.) Therefore, synchronous data should be construed as TDM data that is not packetized. The '858 itself contrasts "synchronous data" of telephones from "packet data" sent to "network packet services." (1:22-24.)[12]

4. Rembrandt's Constructions Of Terms Directed To "Portions" Of "Bandwidth" Do Not Comport With The Specification (#5-12, 15, 21)

Rembrandt's protestations notwithstanding, the '858 repeatedly describes the "portions" of "bandwidth" as being "fixed" at "initialization." This is so because the packet modules (to which a "portion" of bandwidth is allocated) contend for "a fixed network pipe" having a "'fixed

[12] This is consistent with how TDM data can be sent over telephone networks, Paradyne's '819 patent explains sending TDM data without packet headers over the telephone line. (F1461.)

amount of TDM bandwidth.'" (6:18-20, 33-35; 9:26-28; 1:67-2:1.) The synchronous data get the "remaining" portion of bandwidth. (5:28-29; FIG. 5) (RB18.) The specification never describes allocating portions of bandwidth other than by fixing them at initialization because it would make no sense to change them after initialization - the portion is "fixed" to correspond to the "fixed amount of TDM bandwidth" of the network pipe.

Furthermore, Rembrandt's construction of **"portion of bandwidth . . . allotted to packet data"** purports to allot slots to packet data but does not even require that packet data be transmitted in this allotted portion. (#6.) The patent is clear that even if there are several MAPCs, each group of modules share its own separate MAPC. (11:5-10.)

Rembrandt also says, without explanation, that our construction of **"predefined bandwidth"** (#13-14) in claims 7-11 as referring to "first and second portions . . ." is "inconsistent with the claim language." In fact, it **is** the claim language. These claims call for "first" and "second" portions of bus bandwidth, and further say the bandwidth of the bus is "predefined." Therefore, the "predefined bandwidth" must refer to these first and section portions. This is also consistent with the specification, where the act of predefining the bandwidth distinguishes one portion from the other. (9:26-28; 5:11-13.)

5. "Portion" (#5)

Rembrandt's argument that the patent "never limits a 'portion' to less than the full bandwidth" (RB21) obviates the **portion** limitation and contradicts the specification, which always allocates some portion to packet and some portion to synchronous data. (5:10-12, 21-29; FIG. 5.) Rembrandt's reliance on disclosure relating to use of more than one "multiple-access packet channel" (11:6-17) is misplaced. The specification says slots "1-6" would be a first channel and slots "7-12" would be a second channel, but does *not* say slots 1-12 are *all* of the slots on the bus. To the contrary, FIG. 5 shows a total of "N" slots. If the cited language was

intended to mean all bus slots were used for packet data, the second channel would refer to slots "7-N," not slots "7-12." And Rembrandt itself concedes that the first and second channels are "*within* the portion of the bus that is used for packet-data transmission." (RB18.)

6. "Distributed Packet Manager" Is A Coined Term That Must Be Construed To Conform With The Distributed Packet Manager Disclosed In The Specification (#24)

Distributed packet manager (DPM) does not have a plain meaning. As we explained (CP22), the specification and file history are clear that a DPM operates without a central packet manager (CPM), and that this is the "inventive concept" of the '858. (3:51-67.) Indeed, this is the only difference between the prior art NAU of FIG. 2 and the NAU of the invention depicted in FIG. 3. (2:15-27; 3:56-59.)

Consistent with our construction, Rembrandt *admits* that packet data sources must "agree among themselves how to allocate time slots on a TDM bus" (RB17), yet then seeks to remove any requirement for them to "agree" on anything. Rembrandt wrongly states that a disclosed embodiment shows packet modules' bus access managed "not by communicating" but by "wait[ing] for its ID number to equal the count or ID number." (RB22.) Immediately after the text Rembrandt cites, the '858 says that "[t]o implement this slotted-access method [the one relied on by Rembrandt] two additional signals are bussed between packet application modules," referring to PREQ/PHOLD signals. (8:8-11.) These signals are "required." (10:32-34.) ID counting does not manage the bus. The '858 requires communication.[13]

---

[13] A Paradyne patent states that the advantage of Moore's '858 "PHOLD" approach "is that a central packet manager is not required." (C112) (4:23-33.) Rembrandt's expert admits Figure 6's system would "probably break" without PHOLD. (C125, Almeroth Tr., 176:12-177:11.) Cited art explains in "a distributed arbitration method," unlike a "centralized" method, "there is no arbiter *per se*; instead the communicating modules resolve their contention problems in a democratic manner *by exchanging some form of arbitration amongst themselves*." (F1651) (1:32-45.)

7. Network Access Manager (NAM) Is A Component Of An NAU And Should Not Be Broadly Construed To Cover The "Eliminated" Central Packet Manager (#32)

Rembrandt provides no support for arguing that a NAM need not be part of an NAU when the only disclosed NAMs are part of NAUs. (FIGS. 1-3; 3:43-44.) Rembrandt's construction that the NAM controls "the assignment of synchronous and packet data portions . . ." is a blatant attempt to construe NAM to perform functions of a CPM, even though ***elimination*** of the CPM is the "inventive concept." (3:56, "the packet manager is eliminated.") Rembrandt appears to be trying to stretch the claims to cover assignment of time slots to individual packet data sources, the result of using a CPM – not a NAM. A NAM only allocates a group of time slots, or "portion of the bandwidth . . . to all the packet data" at initialization. Packet data sources must then agree among themselves how to use this portion without individual time slots assigned to any packet data source. (4:56-61; 5:11-13.)

8. Data Communications Apparatus/Equipment Is A NAU (#1)

In an 11th hour about-face, Rembrandt's brief proffers (without noting this) a never before disclosed construction of data communications apparatus/equipment (DCA/E) - "data communications apparatus." Rembrandt says that the Cable Parties are wrong to construe DCA/E as a "device," because "apparatus" is supposedly used as a plural. Rembrandt fails to mention that its *own* construction in the Joint Claim Chart *filed* in this action is: "a data communication ***device.***" Rembrandt plainly understood that this is the only construction consistent with the intrinsic evidence. NAU stands for "Network Access *Unit*," which is a device having "slots" which "circuit boards" are "plugged into." (1:13-16; 7:47-53.) Every NAU described in the patent is a box. (FIGS. 1-3.)[14] A NAU is described in the '858 as "known" equipment (1:12-13),

[14] The '858 does not say, as Rembrandt alleges, that NAU means a type of "architecture." The patent (1:56) references the type of architecture that is used in NAU **100.**

and Paradyne, the original assignee, repeatedly described this "known" equipment as a single device. Paradyne Pat. No. 6,674,750 says a NAU is a "device" that "resides" at one place like "a home office" ('750 at 1:29-35), and Paradyne's website pictured a "Network Access Unit" as one device. (C79.) Similarly, prior art to AT&T, Paradyne's parent, provides a "circuit diagram for a network access unit." (C82, 85) (2:61-63; FIG. 4.)

Finally, although Rembrandt says the specification does not support construing NAU as facilitating communication between a local network and a network facility, that is *exactly* what the patent says every NAU does: "Communications equipment [known] as a 'network access unit' (NAU) typically provides frame-relay-type services between a local communications network and a network facility." (1:13-16.)

9. Cable Parties Construe "Bus" According To The Specification And Plain Meaning (#2)

Rembrandt says its bus construction is plain meaning, but cites no evidence or even explanation why its definition (as opposed to others) should apply. Our construction comes from evidence (C27, 30) consistent with how "bus" is used in the specification. Figures 1-4 show a bus as "hardware line(s) within a device used for data transfer among its components."[15]

10. Rembrandt's Attempts To Construe "Plurality Of Packet Data Sources . . ." Limitations In A Vacuum Must Be Rejected (#17-22, 25, 30-31)

The specification says the term **packet data source** (#17) means a circuit board. (CP20-21; 7:47-48), and the inventor himself so testified. (C94, Moore Tr., 72.) Rembrandt offers no

---

[15] The inventor testified that "bus" in the '858 and at the time of invention, meant "backplane," which "is usually a PC board which interconnects several modules." (C93-94, Moore Tr. 44, 72.) If these components are spread over a neighborhood, not connected to some kind of internal bus in a single device, it is apparent they cannot timely communicate PHOLD and PREQ signals to one another. (C124-26, Almeroth Tr., 173:20-174:3; 180:17-181:24.)

explanation why this term should be construed contrary to the evidence. The Cable Parties' construction is consistent with the patent and should be adopted.

Rembrandt says our construction of **plurality of packet data sources . . . that share the allotted bandwidth for transmitting packet data** and related terms (#20-23) is incorrect because we exclude use of a central packet manager ("CPM"). Again, however, the "inventive concept" is "sharing" the packet bandwidth rather than using a CPM and assigning slots to individual packet modules, and the specification therefore repeatedly distinguishes "sharing" from using a CPM. (2:46-48; 3:4-8; 3:51-56; 4:58-64.) The CPM is "eliminated." (2:56.)

Rembrandt also says "sharing" should not be limited to "contending for the use of the entire channel in which no time slot is assigned to any particular packet data source" because the patent says a packet data source "may send any prescribed number of packets." (RB24.) These two statements do not dictate Rembrandt's conclusion. Packet data sources (modules) "share, and contend for, the entire TDM bandwidth," referring to the MAPC. (2:56-57.) Once a module gets its turn to use the MAPC, the full MAPC is made "available" to the module (5:7-10) for its "sole access" until it "releases" the MAPC. (7:5-13.) Although all slots in the MAPC are available (none are individually assigned), the module whose turn it is to use the MAPC may send one packet over many slots (as shown in FIG. 5) or send many packets over even more slots, at its discretion. (10:12-17.) "If a packet application module 'grabs' the 'multiple-access packet channel' that packet application module then transmits using the full 384 Khz of bandwidth." (6:7-10.) A CPM, by contrast, uses time slots assigned to each module and requires a module to stop transmitting when it uses up its individually assigned time slots.

Rembrandt incorrectly states that "a time slot is assigned to each packet source" in a preferred embodiment. (RB24.) In fact, the patent repeatedly distinguishes this from the invention. For example, "sharing" is "in contrast to allocating a fixed fraction of the TDM

bandwidth [i.e. time slots] to each packet application module." (4:58-62; 2:21-23.) Indeed, FIG. 5 depicts a single packet from a single module spanning all 6 of the MAPC time slots, which could not happen if any of the slots 1-6 in the MAPC were assigned to individual modules (because one module uses all six time slots during its turn, if time slots were assigned to modules only one module would ever be able to transmit in the MAPC).[16]

11. "Interface Circuitry" Carries Out The "Inventive Concept" (#25)

Rembrandt argues ". . . **interface circuitry** . . . could simply be construed as circuitry that puts the packet data into ". . . an appropriate allotted time slot . . . ." This ignores the specification, which says that the interface circuitry carries out the "inventive concept" of sharing an MAPC without a CPM to assign time slots to individual modules. (3:51-52; 3:63-4:4.) Once again, Rembrandt's attempt to construe claim terms in a vacuum must be rejected.

12. "Counter" Must "Only" Count MAPC Slots (#33)

Rembrandt argues against construing counter to count "only" the slots in the "second portion of the predefined bandwidth" (MAPC) because it says "nothing in the ... specification suggests this." (RB25.) Again, Rembrandt is wrong. The '858 expressly says that the counter "only counts" the MAPC slots. (7:35-38) (CP22-23.) Counting *only* the MAPC slots is what

---

[16] Rembrandt provides a bare quote in RB footnote 9 hoping to imply assignment of time slots. Actually, the '858 explains that a time-slot contains 8 "bit time-slots." (5:58-60.) The bit time-slots of the MAPC are "counted in a repeating sequence" from 0 to some number, where each number in this count corresponds to a "unique ID number" given to each module. (7:31-35, 46.) When a module's number "matches" the number of the count, that module "can attempt to access [the] TDM bus." (7:25-31.) It may or may not be able to access the bus at that time, depending on the PHOLD signal that the modules exchange with each other. (FIG. 8C.) No time slots are assigned. Indeed, the number of this count has no correlation to the bit time slot position in the frame (7:54-56; 8:2-7), which means it would be impossible to use the bit time-slot number to assign slots.

enables the module to know when its turn has arrived to "attempt to access [the] TDM bus" by then communicating with other modules. (8:24-32; 7:28-31.)

13. The Parties Agree That "Controlling Access . . ." And "Transmitting Packet Data" Should Be Construed Like "Distributed Packet Manager" (#26, 29, 31)

The parties dispute over "controlling access . . ." (#26, 29) and "transmitting packet data . . ." (#31) is similar to their dispute over "distributed packet manager," which is the component in each module that controls access and transmits the packet data. The support for our construction of these terms is set forth in Sections 6, 10 and 11 above.

V. '444 PATENT

1. Rembrandt's Construction Of "Communication Link Control Information" (CLCI) Is Not, And Cannot Be, Supported With Intrinsic Evidence (#3)

Because Rembrandt's construction of CLCI is not supported by the specification or any other intrinsic evidence, Rembrandt relies solely on an extrinsic, unsupported conclusion of its "expert" that Rembrandt's construction "is how a person of ordinary skill in the art would understand the term." (RB14.) The Federal Circuit rejects this approach. *Network Commerce,* 422 F.3d at 1361 (rejecting claim construction expert declaration for failing to support "conclusion with any references to industry publications or other independent sources" and for being "at odds with the intrinsic evidence"); *Phillips*, 415 F.3d at 1318 ("[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.")

Rembrandt's construction, "information regarding the communication," ignores entirely the language requiring that the information "control" the "communications link." "Regarding" is certainly not "controlling." (C51-52.) Further, CLCI is a coined term having no "accepted meaning," and therefore the proper construction is the only embodiment disclosed in the specification. *See Irdeto*, 383 F.3d at 1300, 1302-03. Finally, under Rembrandt's construction,

it would be impossible to know where the preamble ends and the optional administrative header (which is not part of the preamble) begins. (CP25.)

Rembrandt's expert says with no support that a preamble (which must "include" the CLCI in the claims) is represented as a "predetermined pattern" of bits, such as "repeating" the sequence "one-zero . . . . 31 times" followed by "one-one" (AL ¶42), and that one of the ideas of the patent "is to have available different preamble patterns," each of which represent different CLCI. (AL ¶43.) There is nothing in the patent that even remotely resembles this. The '444 describes creating a preamble during operation that includes four discrete pieces of substantive information, each of which can have different values depending on the actual transmit and receive rates, message format and address. (9:35-55.) For example, the four bits that represent the transmit rate can "encode as many as sixteen . . . rates." (9:53-55.) The '444 does not describe the concept of using a different "predetermined [bit] pattern" for the preamble depending on the information to be conveyed (as compared to a preamble created during operation containing several discrete items of substantive information).

Rembrandt's reliance on claim differentiation does not save its proposed construction. Claim differentiation is just a presumption, not a basis for disregarding the specification, ignoring claim language and construing a claim based only an unsupported expert declaration, as Rembrandt urges. To the contrary, as the Federal Circuit reiterates, "the presumption created by the doctrine of claim differentiation is 'not a hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history.'" *See Regents of University of Cal. v. Dakocytomation Cal., Inc.*, 517 F.3d 1364, 1375 (Fed. Cir. 2008) (citations omitted); *The Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1302 (Fed. Cir. 1999)

(declining to apply claim differentiation based on a dependent claim because the doctrine "does not serve to broaden claims beyond their meaning in light of the specification.")[17]

2. The "Maximum Rate . . . Supported" Is Obtained From Preamble CLCI (#5-9)

Rembrandt's specification citation to support its construction of **"maximum rate capable of being supported"** (#8) describes transmitting the preamble at a rate "lower than that of the normally transmitted data rate" (7:28-29), but does not mention, and has nothing to do with, the claim term **maximum rate**. Rembrandt ignores the one portion of the specification that explains **maximum rate**, where the '444 explains that the "receive rate," which is part of CLCI, "allow[s] the transmitting device to communicate to the receiving device the *maximum receive rate* at which the transmitting device can receive." (10:57-59.) Rembrandt's expert admits that the maximum rate capable of being supported requires actual knowledge of the channel between the transmitter and the receiver at transmission time. (C123.) Our construction that the **maximum rate** (#5) must be obtained from the preamble acknowledges this reality.

3. The Court Should Construe "Delimit . . . From Silence" And "Frame the Message" In Accordance With the Specification (#1)

Rembrandt offers no construction for "delimit . . . from silence" or "frame the message," and would have the Court simply read these phrases to the jury. However, these concepts are key points of novelty in the specification, and they are disputed. The Court therefore should construe them. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute.")

---

[17] The Cable Parties did not, as Rembrandt asserts, construe CLCI and "bits representing" CLCI to mean the same thing. Our construction is clear that the bits encode the CLCI.

The '444 distinguishes a number of prior art techniques that cannot be used to "reliably discriminate silence from a signal," such as following silence with bits that encode "an arbitrary data value" (such as bits encoding CLCI information) (2:35-38.) The patent also mentions "existing techniques us[ing] special marker symbols" that were ineffective. (2:39-40, 48-52.) The '444 offers only one successful way to delimit from silence - sending the "first symbol [of the preamble] using an increased power level." (7:49-53.)[18] That some dependent claims require boosting energy of the first symbol does not alter the construction for "delimit . . . from silence" because the specification supports nothing else. *See Regents of University of Cal.*, 517 F.3d at 1375; *The Toro Co.*, 199 F.3d at 1302.

Rembrandt also argues that delimiting from silence does not require using preamble CLCI to identify the end of a message, because the specification supposedly does not teach this. (RB16.) The patent states otherwise. As an initial matter, the claims require that the preamble, not something else, "delimit the message from silence," and "delimiting" is expressly and consistently defined to include the ability to identify both the beginning and "end of a transmission." (2:20-29; 11:59-12:3.) Moreover, the specification *does* teach that the preamble is used to identify the "end of a transmission" - the preamble contains "format" and "transmit rate" information used by the transceiver to determine the "last" symbol in the message. (11:16-22) (C123, Almeroth Tr., 134:16-135:4.)

---

[18] Rembrandt argues without citation that the '444 describes transmitting "the preamble at the same or higher signal power level than the subsequent data." (RB14.) This is incorrect. What the patent says is "[t]he boosted" first preamble symbol need not be transmitted at a level higher "than that needed for normal data transmission." (12:59-63.) However, the first symbol of the preamble must be boosted *relative to the other symbols in the preamble.* (7:49-53; 10:15-31; 12:6-10.) Only "[t]he first symbol is forwarded to gain reduction element **302**" (16:35-36), so only the first symbol can be boosted - the other preamble symbols bypass this element (FIG. 9).

4. "Means for Applying a Preamble to a Communication Message . . ." Includes Structures Necessary For The Preamble To Contain CLCI (#4)

Rembrandt's "expert" says that this means limitation only requires structure needed "to combine the preamble together with the communication message." (AL¶50.) This improperly excludes elements **201-202, 204, 206** and **214** (FIG. 8; 15:4-57), which implement the corresponding function of applying a preamble containing CLCI. Indeed, the transmit sequencer **236**, which Rembrandt *admits* is part of its means, "commands" multiplexer **214** to select, one at a time, each of the four items of CLCI from **201-202, 204** and **206.** (15:17-21, 29-34; 47-50.) It makes no sense to include element **236** but not the elements which it "commands" to apply the CLCI. The expert's contention that structures **201-202, 204, 206** and **214** are not needed because "the preamble has already been formed" (AL ¶50) conflicts with the '444 patent. The patent clearly provides that different fields of the preamble are applied ("applied to a communication message") and sent 1 symbol at a time - the preamble does *not* exist in advance. Rembrandt's construction would eliminate the claim's requirement of applying a preamble including CLCI.

VI. '903 PATENT

1. "Noise Spectrum" And "Calculating A Noise Spectrum Of Said Output" (#4, 12)

Rembrandt's interpretation of **noise spectrum** as "noise signal values" eliminates the "spectrum" requirement altogether in direct conflict with the specification and plain meaning of "spectrum." Rembrandt writes on page 31 conflicts that the "input to box" **68** in FIG. 4 is a "noise spectrum (in the time domain)" and that its output is the "noise spectrum (now in the frequency domain)," quoting 3:42-46. What the patent truly says is "Complex DFT block **68** converts . . . noise *signals* in the time domain . . . into the noise *spectrum* in the frequency domain"). (*Id.*) This passage in the '903 confirms that "noise signals" in the "time domain" differ from a "noise spectrum" in the "frequency domain," the difference being that "noise spectrum" is the frequency domain plot of the noise signals. Only after "noise signals" are

converted into the frequency domain does the patent refer to them as a "spectrum." *Compare* 3:31-42 with 3:45; *see also* 3:62-68 (referring to "noise spectrum analysis block" outputting a "frequency domain plot of the noise signal"); (4:54-57) ("noise spectrum generator circuit **50** . . . calculates a frequency spectrum . . . of the noise at 5 frequencies. . . .")

The patent's (and Cable Parties') meaning of "spectrum" is consistent with the commonly understood meaning of a "spectrum." A spectrum has been defined as "a continuous range of frequencies" and as "the intensity of any radiation or motion displayed as a function of frequency, or wavelength." (C75, 78.) Rembrandt's argument that a "noise signals" are a "spectrum" "regardless of the domain and format in which the noise is represented," is like saying that white sunlight is no different than light refracted through a prism into its constituent colors. The two are not the same; the former is undifferentiated energy; the other is a spectrum.

Rembrandt's own argument on **generating means** (#5, 6) and **"means for calculating"**, (#10) which emphasizes that **calculating a noise spectrum** involves conversion from time domain to frequency domain, undermines its position. (RB 32.) As the '903 shows, DFT block **68** calculates an overall noise spectrum by using a 22 point DFT. (4:54-60.) 5 points from that 22 point DFT calculation are chosen and then sent back to the transmitting modem. (*Id.*)

Rembrandt's reliance on dependent claim 5 rests on faulty interpretation of "means" terms. As with any "means" term, Claim 5 "requires a court first to identify the claimed function and then to determine the structure in the specification that corresponds to that function." *Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Intern., Inc.*, 389 F.3d 1370, 1376 (Fed. Cir. 2004); *see also* (RB3.) Rather than follow this law, Rembrandt first concludes that the structure of **comparing means** in claim 5 is limited to a "comparator **64**," and then concludes that the function of **thereby calculating said noise spectrum** is limited to the function of the comparator. In truth, the function of **calculating a noise spectrum** defines the required

structure, not vice versa. The full structure in claim 5 is available for the "thereby" function. Claim 5 depends from claim 4 and in turn upon claim 1, such that claim 5 already includes claim 1's "generating means for generating parameters responsive to a noise spectrum. . . including means for calculating said noise spectrum of said output." The "means" in claim 5 are part of its overall "generating means . . . including means for calculating said noise spectrum," which plainly include the DFT block, used for "thereby calculating said noise spectrum."

2. "Generating Parameters Responsive To Said Noise Spectrum" (#9, 12)

Rembrandt does not dispute that the only way the '903 describes potentially "generating" parameters is by "choosing" points at 5 frequencies of the 22 point DFT calculation. (4:57-58.)

3. "Adjusting Frequency Dependent Characteristics . . ." (#2)

Rembrandt invites the Court to ignore that the'903 expressly distinguishes prior art because it maintains a constant signal to noise ratio when the signal is received (*e.g.*, distance between "Tx Signal" and "Noise signal" in FIGS. 1a-3a) regardless of where noise is introduced in the transmission. The applicant similarly distinguished the invention in prosecution by arguing that prior art "is deficient in its response to additive noise as shown in Figures 3a, 3b and 3c of the instant application." (F1153.) The intrinsic evidence confirms that "adjusting" must be construed to achieve a constant signal to noise ratio, regardless of where noise is added.

4. §112, ¶6 Claim Terms Require The Actual Corresponding Structures

Rembrandt strives to define corresponding structure at a high level of abstraction, so removes critical aspects of disclosed structure. The law requires otherwise. When the patent clearly links structure with a claimed function, that structure is "corresponding" for §112, ¶6. *See Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1551-52 (Fed. Cir.1997); *Frank's Casing*, 389 F.3d at 1377.

Rembrandt is incorrect that the Cable Parties believe the **first transmitting means** (#1) should not be construed under §112, ¶6. The term uses "means" and has its expressly stated function to provide an output. Corresponding structure should be identified for both the "transmitting" and "adjusting" functions. Corresponding structure for "transmitting means" is plainly the "conventional modem transmitter **14**." (3:49-50.)

For **generating means for generating parameters responsive to a noise spectrum of said output** (#5), in addition to misconstruing the function, Rembrandt omits structure necessary to "generate parameters." The only potential disclosure for "parameters" are coordinates selected for 5 frequencies from an overall 22 point DFT of the noise spectrum. (4:54-59.)

Regarding **means for calculating said noise spectrum** (#10), Rembrandt proposes a function that includes and relies upon its flawed argument that "noise signal values" are the same thing as a **noise spectrum**. As for structure, Rembrandt proposes elements **24** and **50** from Figures 4 and 5, which include the elements Cable Parties propose.

Regarding **second transmitting means. . .** (#13), Rembrandt fails to incorporate the '903's "secondary transmitter" structure. Rembrandt cannot dispute that the corresponding structure is a device called a "secondary channel transmitter **38**" which transmits "on a side band of the primary channel at a low transmission rate." (4:1-5.)

Finally, as for **computing means for computing preemphasis coefficients from said parameters** (#15), Rembrandt has no credible response to the fact that the claims themselves, the drawings (FIG. 5, element **48**), and the written description (2:45-54) all require that the computing means be found in the transmitting modem. "Parameters" must be sent "to the transmitting modem" and the computing must be performed "from said parameters," according to the claims. These elements can be satisfied only if the transmitting modem does the

computing from the parameters that have been transmitted to it, as shown in the specification. Rembrandt's construction makes no sense and is unsupported.

VII. '159/'234 PATENTS

1. Programs Are Executed Only From Nonvolatile Program Memory ('159, #6) ('234, #4-5)

Contrary to Rembrandt's brief, we never proposed that a volatile read/write data memory or register cannot exist in a "stored program controlled apparatus." Rather, our constructions follow the patents' unambiguous teaching that its "invention" is to updating the nonvolatile program memory from which the apparatus executes its programs:

> "A typical stored program controlled modem also includes a ***read/write data memory*** . . . For purposes of this ***invention***, however, these other elements are ***irrelevant***, so they are ***not included*** in the drawing."
>
> * * *
>
> The operation of the Fig. 1 apparatus is quite simple. The ***processes*** carried out by the FIG. 1 apparatus are effected by ***executing a sequence of instructions*** that the processor receives ***from program memory 20*** via bus **11.**
>
> * * *
>
> At the very least . . . memory **20** ***must*** be nonvolatile.

(2:62-68; 3:16-20; 4:15-16.) Given this disclosure, Rembrandt cannot legitimately construe the patents' claims to cover execution of programs from volatile read/write data memory such as RAM. (RB 36.) "Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001); *see Honeywell Intern., Inc. v. ITT Industries, Inc.*, 452 F.3d 1312 (Fed. Cir. 2006) (construing "fuel injection

system component" as a "fuel filter" in light of specification's statements of the "invention."); *Verizon Services Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007).

Prosecution history confirms this point. The applicant distinguished the invention's nonvolatile memory from program memory having ROM and RAM. (F724) ("The examiner took the position that the memory in [prior art] corresponded to the memory of claims 1, 6, 8 and 22 [issued claim 18]. However, [prior art's] memory **19** is made up of two types of memory, *i.e.*, a read only memory ("ROM") **20** and a volatile RAM memory portion **19.** In the present invention, the initialization program is located in the single memory, which is a nonvolatile EEPROM.")

Rembrandt cites a number of passages (pp. 36-37) which it contends teach storage of programs in and execution of programs from volatile memory. In fact, none of these passages says this, and most actually *teach away* by referring to execution of programs only from non-volatile memory **20**.[19] (C134-41; Royce, ¶¶ 1-16.) For example, Rembrandt asserts that 1:49-59 and 2:47-50 supposedly teach program execution from volatile memory. (R36.) 1:49-59 actually instructs, however, that the EP set of programs must be stored in nonvolatile memory and states that this program set usually is the ***only*** software found in "modems, where essentially the sole function of the modem software is to support communication." (1:59-64.) 2:47-50 does refer to general "program memory" in which all programs are stored, but this passage refers to nonvolatile "program memory **20**" (2:52), the only memory the specification refers to as "program memory."

While Rembrandt relies on and quotes the specification passage at 3:64 (R36), it ellipses out a key portion of the passage that confirms it is referring *only* to nonvolatile memory **20** and not some other memory as Rembrandt suggests. The new EP is installed at locations X through

---

[19] Cable Parties believe these records are unambiguous, but, out of an abundance of caution provide a rebuttal expert declaration of Mr. Royce Fletcher at C134-41 regarding assertions of Almeroth about these patents. Citations to that declaration are (C__, Royce ¶ __)

X+N of memory **20**, this passage says, after which "memory locations that serve as software-defined registers **in the new EP set** [ellipsed out by Rembrandt] are populated with data." (3:64-4:2.) Because this "data" is installed in the new EP program set that is in nonvolatile memory **20**, the "data" is also installed in nonvolatile memory **20**. Moreover, even if **data** were stored in volatile registers, that does not mean **programs** are stored in and executed from them.

Rembrandt's commingling of the step of "download[ing] the remainder of programs into memory **20**" with a much earlier passage referring to storing "data" "elsewhere" is similarly misleading. The first passage Rembrandt cites is column 4's disclosure of downloading **programs** into nonvolatile program memory **20** for execution, which is the subject of the invention. (4:36; 39.) In contrast, the second passage Rembrandt mentions is an earlier quote regarding storage of ***data*** elsewhere, consistent with the "offset address that can be stored in register **40**." (3:38; FIG. 1.) In this regard, Cable Parties *never* say that a volatile read/write data memory or register cannot be present. Rather, we follow the specification's express instruction that **program** memory from which programs are executed "must" be nonvolatile.

Neither Rembrandt's reliance on the "remote execution capability" (R36) nor the fact that the disclosed device "does not need to have a nonvolatile 'boot-up' **read-only memory**" (R37) is relevant. The former refers to the ability to receive a command on line **12** that affects which program the processor executes from memory, causing the apparatus "to branch ***to*** the subroutine ***in the EP set*** that installs new EP sets," and this EP set is stored in and executed from nonvolatile program memory **20**. (3:52-54; 63.) The latter passage conveys only that the device need not have a "read only memory" that can't be written to. The patent never says that a nonvolatile program memory is optional. Rather, it says that volatile read/write data memory, such as RAM, is "irrelevant." (2:47-67)(C128, Almeroth Tr., 243:16-245:9.) Neither passage supports execution of programs from volatile memory.

Finally, although the specification unambiguously says that programs are executed from program memory **20** which "must" be nonvolatile (4:15-16), Rembrandt deduces that program memory used to store and execute programs must be volatile because the "copy sequence" described at 4:46-59 "is vulnerable to power failures." (R37.) This argument turns the specification on its head, as the need to account for power failures actually demonstrates the criticality of using nonvolatile memory **20** to store and execute programs. (1:57-58.) The "vulnerability" relied on by Rembrandt relates not to loss of the programs, but instead to possible loss of the "starting address" that identifies where to begin executing the EP_{new} program set from nonvolatile memory **20** when the device is rebooted after a power failure. This vulnerability is only an issue when register **40** is volatile (4:45), which is why protecting the data in register **40** with reserve power solves that problem. (4:63-66.) Protecting this register, however, would be of no use if the program memory was volatile because the register would contain a starting address identifying programs that would be erased from volatile memory in the event of a power failure. (Royce, ¶ 7.) Accordingly, the "copy sequence" relied on by Rembrandt actually demonstrates that non-volatile memory must be used, as the point of it is to have the programs successfully execute from the first half of program memory **20**.

As for our constructions of the "alterable storage means..." ('159, #12-14) and "means for receiving a trigger signal, " ('234, #15) these limitations similarly require that program memory **20** from which the EP set is executed for the claimed function is nonvolatile. While Rembrandt suggests that our constructions require all memory to be nonvolatile, as explained above, our construction requires only that **memory** which stores **programs** and from which **programs** are executed must be nonvolatile. Register **40** is not "program memory." The issue for these "means" claims is that Rembrandt seeks to omit corresponding structure necessary for the claimed functions and say that an ordinary "register" or conventional "processor" arrangement is

enough, without including the actual FIG. 1 arrangement, with modifier circuit **30**, the various disclosed busses, and the EP set executed by processor **10** from nonvolatile program memory **20**.

2. Claimed "Processor" Receives Information Before Storage In The "System" (159, #20-21)

In the disclosed embodiment, processor **10** has a "port" through which the disclosed device communicates with line **12** (2:40-41; FIG. 1.) Since this "port" is part of the processor, there is no storage or other component in between the port and the processor. This is what the '159 claim 8 and 10 limitations to a "communications port coupled to [the] processor" are directed to. Information received over line **12** cannot be stored in the device before it reaches processor **10**. This is consistent with claim 10's requirement that a received command be executed by the processor "effectively when it is received" by the system. Col. 4:11-13 relied on by Rembrandt (R38) does not say or suggest that any downloaded data is stored in register **40** before it reaches processor **10.** Rather, the specification says that it is processor **10** that loads information into register **40** via bus **13**. (2:51-54; 58-60; FIG. 1.)

3. "Additional . . . Limitations" Come Right From The Intrinsic Evidence

Rembrandt contradicts the intrinsic evidence when it says that only the "boot-up" programs, and not the communications programs, are executed at initialization. (R38-39) ('159, #8.) As the applicants stated during prosecution to distinguish prior art, "[i]n the present invention . . . the ***initialization programs, including the communications programs*** can be changed while the system is still operating." (F727.) This prosecution history is all the more compelling in view of the fact that the specification itself does not use the word "initialize" at all, much less instruct that some portion of the EP set (which includes both boot-up and communications programs - 1:52-64) is somehow excluded from the "initialization programs." Rather, the patents refer to the EP set as *one* program set which is "needed to maintain communications" (*Id.*)

Rembrandt complains that we require all contents of memory "to be erased at *the same time*," but that is not our construction. What the claims require is erasure of the entire program memory sometime during the sequence of steps that complete the update of the device's program set. While Rembrandt cites to disclosure that each half of the nonvolatile memory can be separately erased (R39), both of the disclosed updating methods require a "bulk erase" of **both** halves of the memory as part of a given update. (4:28-36 steps 1 and 4; 4:49-59 steps 1 and 5.)

4. The Newly Downloaded EP Set Is Immediately Executed (234, #9, 12)

As described in our opening brief (pp. 31-34, 39), the EP_{new} set of programs is downloaded and immediately executed such that communications continue "seamlessly." The citations to the claims relied on by Rembrandt (R 39-40) are consistent with our construction. The language it relies on from claims 2 and 5 actually describe steps performed *after* control is immediately transferred to the EP_{new} set - there is no claim step in between the step of "installing the EP_{new} programs" (#9) and the step of "altering operation ... to execute the EP_{new} programs." (#12) Claim 8 relates only to how control is immediately transferred to the "EP_{new} programs."

5. Our "Means" Constructions Do Not Concede Validity Under §112 Requirements And Properly Define The Claims' Functions And Corresponding Structures

Although the Cable Parties provided constructions for the §112, ¶6 terms in the '159 claims (CP36-38) ('159, #11-19), Rembrandt is correct (RB40) that we do not believe these claims are fully supported under §112. Based on what we understand to be the Court's practice, we did not raise §112 invalidity issues now. Instead, we construed terms to include the corresponding structures that would necessarily have to be included in any construction, and will present §112 invalidity arguments at a later time as permitted. Regarding the actual structures, Rembrandt improperly omits structures necessary for and linked to the claimed functions. *See Nomos v. Brainlab USA, Inc.*, 357 F.3d 1364, 1368 (Fed. Cir. 2004) (interpreting means clause to

include probe with fixation device, not just probe alone, where fixation device was required for claimed function).

Further, Rembrandt's proposed functions for "means" claims refer to "displacement multi-bit memory address" (#12, 13) and "offset address," (#14) but fail to define those terms. As the patents and their history instruct, these terms mean the same thing. (F388-89) (Claim 22 [then claim 18, and having "offset address"] is similar to claim 1, and the above remarks in connection with claim 1 [comments re "displacement multi-bit address] are adopted to claim 22.") These terms refer to address information that changes the starting address location for the EP set as shown in the specification. (3:23-31; 3:57-59; 4:37-40; 4:63-66.) Prosecution history confirms that information stored in a register that affects an address, such as a single bit or flag, is not an actual address and is not the "displacement multibit address" or "offset address" of the claims. (F388) (Applicants argue that "one bit of information" is not a "memory address" because it cannot "be used, as a memory address. To hold otherwise would rob the phrase 'memory address' of its meaning, since most registers in a microprocessor, for example, at one time or another affect the address that is applied to memory.") Rembrandt's constructions dodge this point by giving no definition to these terms.

Jack B. Blumenfeld (#1014)
Morris, Nichols, Arsht & Tunnell LLP
1201 N. Market Street
Wilmington, DE 19899
(302) 658-9200
jblumenfeld@mnat.com

John W. Shaw (No. 3362)
Young Conaway Stargatt & Taylor, LLP
1000 West Street
Wilmington, DE 19801
(302) 571-6600
jshaw@ycst.com

Co-Liaison Counsel for All Parties Other Than Rembrandt

Dated: July 2, 2008

CERTIFICATE OF SERVICE

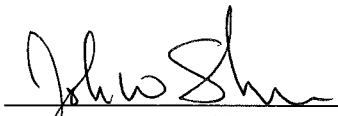
I, John W. Shaw, Esquire, hereby certify that on July 2, 2008, I caused to be electronically filed a true and correct copy of the foregoing document with the Clerk of the Court using CM/ECF, which will send notification that such filing is available for viewing and downloading to the following counsel of record:

Collins J. Seitz, Jr., Esquire
Francis DiGiovanni, Esquire
Connolly Bove Lodge & Hutz LLP
The Nemours Building – 8th Floor
1007 N. Orange Street
Wilmington, DE 19801
cseitz@cblh.com
fdigiovanni@cblh.com

Jack B. Blumenfeld, Esquire
Morris Nichols Arsht & Tunnell LLP
1201 North Market Street
P.O. Box 1347
Wilmington, DE 19899-1347
jblumenfeld@mnat.com

I further certify that on July 2, 2008, I caused a copy of the foregoing document to be served by e-mail and hand delivery on the above-listed counsel of record.

YOUNG CONAWAY STARGATT & TAYLOR, LLP



Josy W. Ingersoll (No. 1088)
John W. Shaw (No. 3362)
Jeffrey T. Castellano (No. 4837)
1000 West Street, 17th Floor
Wilmington, Delaware 19801
(302) 571-6600
jshaw@ycst.com